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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MACARTHUR, VICTOR L	

ART UNIT	PAPER NUMBER
3679	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,398	OHSHITA ET AL.	
	Examiner	Art Unit	
	Victor MacArthur	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 March 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/28/05, 10/24/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show element (27) as described on line 27 of page 9 in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Intended Use

Claim 1 recites functional intended use limitations that are not taken in combination with the positively recited structure as follows:

- In lines 1-3 of claim 1, it appears that the applicant does not intend to positively limit the "joint boot" invention with the functional limitations "to be attached to an outer housing of an outer contour having a plurality of recessed portions in the circumferential direction thereof" or "to be attached to a shaft". Rather, these functional limitations appear to be a mere intended use for the "joint boot". For purposes of examination the examiner has considered the claims without combination. "The recitation of a new intended use for an old product does not make a claim to that old product patentable", In re Schreiber, 44 USPQ2d1429 (Fed. Cir. 1997). Accordingly, the prior art meets the applicant's claimed intended use merely by being capable of such intended usage regardless of whether or not such capability is expressly disclosed (i.e., wherein capability is inherent to the disclosed structure). If the applicant wishes positively limit the scope of the "joint boot" invention with the phraseology mentioned above, the limitation "to be" (lines 2 and 4 of claim 1) must be deleted from the claim.

Claim Objections

Claims 1-10 are objected to because of the following informalities:

- Claims 1 and 4 refer to the intended use phraseology noted in the "Intended Use" section above in a positive manner. All such references to a mere intended use must be amended to be functional in nature, for example, by replacing "outer housing is externally fitted" (line 9 of claim 1) with --outer housing is to be externally fitted-- or some other functional phraseology in the interest of claim clarity. Note that positive

reference to an intended use limitation renders the claims unclear as to what is being positively claimed and what is mere intended use. If the applicant wishes for such phraseology to be positively recited then the claims must be amended accordingly (e.g., by deleting the limitation "to be" from lines 2 and 4 of claim 1).

- The claims are objected to as failing to comply with 37 CFR 1.75(i) because elements of the claims are not separated by line indentation. Furthermore, the lines are not double-spaced.
- The pronouns "its" (lines 7 and 8 of claim 1) and "them" (line 4 of claim 9) must be replaced with specific element nomenclature in the interest of claim clarity. Does "its" refer to the bushing, the attachment part, the outer housing, etc.?
- The term "the arc-like wall portions" lack proper antecedent basis and render the claims enigmatic with the word "like". The term should be replaced with --arc shaped wall portions-- to improve claim clarity.

Appropriate correction is required. For purposes of examining the instant invention, the examiner has assumed these corrections have been made.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- It is unclear what the phraseology "deviating from an external fitting area by the large-diameter attachment part in the axial direction of the bushing" (lines 13-14 of claim 1) is meant to convey. The term "deviating" as used in the claim is enigmatic as to whether it defines a space, specific location, variation in magnitude or movement of elements. Does "by the large-diameter attachment part" describe a degree of proximity to the attachment part or a space equal in measure to the attachment part? For purposes of the current examination the claim has been rejected under prior art as best understood by the examiner (i.e., that the protrusions are disposed in some position relative to some external fitting area wherein the fitting area is near the large-diameter attachment part). Claims 2-10 depend from claim 1 and are thus similarly rejected.
- It is unclear what the phraseology "deviating on the opposite side to the bellows part from said external fitting area" (line 2 of claim 2) is meant to convey. Firstly the term "the opposite side" lacks proper antecedent basis. Secondly the term "deviating" as used in the claim is enigmatic as to whether it defines a space, specific location, variation in magnitude or movement of elements. It appears that the applicant may be trying to differentiate between the embodiment of figure 5 and the embodiment of figure 8 by describing the position of protrusion (56). However, it is unclear which embodiment claim 2 is meant to be drawn to. For purposes of the current examination the claim has been rejected under prior art as best understood by the examiner (i.e., that the protrusions exhibit some form of deviation on an opposite side of some element with respect to the bellows and/or

the external fitting area). Claim 5 is similar in terminology and thus similarly rejected. Claim 6 depends from claim 5 and is thus similarly rejected.

- Regarding claim 3, it is unclear how applicants protrusions (56) which are located on the inner surface of the bushing (20) can be "at the upset part" since the upset part (46) is located on the outer surface of the bushing (20) as seen in fig.1. For purposes of the current Office Action the examiner assumes the limitation "at" to broadly mean near, proximal, on the same element (i.e., bushing), etc. Claim 4 depends from claim 3 and thus is similarly rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Devers (U.S. Patent 6,672,596).

Claim 1. Devers discloses (figs.1-9) a joint boot comprising: a boot body including a large-diameter attachment part (large diameter end part of 38), a small-diameter attachment part (small-diameter end part of 38), and a bellows part (middle part of 38) integrally linking both; and a bushing (40) assuming, on its outer peripheral surface (outer surface of 40) to which the large-diameter attachment part is externally fitted, a circular form (circular form of outer 40) in cross-section and being provided, on its inner peripheral surface (inner surface of 40), with a

plurality of lobe portions (44) in a circumferentially distributed manner; wherein the bushing is provided on the inner peripheral surface with protrusions (50 and/or protrusion between 50 as seen in fig.3); the protrusions are disposed in a position deviating (in size and/or position) from an external fitting area (external area of 40 contacting 38) by (near) the large-diameter attachment part in the axial direction of the bushing.

- The Devers large-diameter attachment part is fully capable of being used as intended i.e., to be attached (via 40) to an outer housing of an outer contour having a plurality of recessed portions in a circumferential direction thereof.
- The Devers small-diameter attachment part is fully capable being used as intended i.e., to be attached to a shaft.
- The Devers bushing is fully capable of being used as intended i.e., to be interposed between an outer housing and a large-diameter attachment part.
- The Devers bushing inner peripheral surface is fully capable of being used as intended i.e., with an outer housing wherein the outer housing can be externally fitted and fixed thereto.
- The Devers lobe portions are fully capable of being used as intended i.e., to be mated with recessed portions of an outer contour in a circumferentially distributed manner.
- The Devers protrusions are fully capable of being used as intended i.e., to be mated with grooves extending circumferentially formed on an outer peripheral surface of an outer housing.

Claim 2. Devers discloses the joint boot as set forth in claim 1, which is characterized in that the protrusions are disposed in a position deviating (in location) on an opposite side to the bellows part from said external fitting area (in as much as the applicant's invention is as best understood by the examiner, see 112 2nd paragraph rejection above).

Claim 3. Devers discloses the joint boot as set forth in claim 2, wherein the bushing is formed in its outer peripheral area with an upset part (radially largest portions of 40) capable of stopping an edge face of the large-diameter attachment part (as seen in fig.4) in the axial direction, and the protrusions are disposed on the inner peripheral surface of the bushing at the upset part (in as much as the applicant's invention is as best understood by the examiner, see 112 2nd rejection above).

Claim 4. Devers discloses the joint boot as set forth in claim 3, which is characterized in that the bushing is provided, over the whole circumference at the inner peripheral surface thereof, with a faying inner peripheral portion (inner portion of 40 to the right of 50 as seen in fig.3) having a diameter, and concurrently, the bushing is provided, over the whole circumference of the inner peripheral surface located at the one end (left end of 40 as seen in figure 3) of the bushing opposite to the bellows part, with an upset (relative to 50) inner peripheral portion (inner surface of 40 extending out past 38 as seen in fig.4) assuming a straight hole form having a diameter (inner diameter of 40); and the protrusions are disposed between the faying inner peripheral portion and the upset inner peripheral portion.

- The Devers inner peripheral portion diameter is fully capable of being used as intended i.e., with an outer housing of bigger diameter (prior to assembly) such that the bushing can be externally fitted and fayed to the outer housing.

- The Devers upset peripheral portion is fully capable of being used as intended i.e., with an outer housing of smaller diameter wherein the upset inner peripheral portion can guide an outer housing when externally fitting the bushing to the outer housing.

Claim 5. Devers discloses the joint boot as set forth in claim 1, which is characterized in that the protrusions are disposed in a position deviating (in location) on the bellows part side from the external fitting area (in as much as the applicant's invention is as best understood by the examiner, see 112 2nd rejection above).

Claim 6. Devers discloses the joint boot as set forth in claim 5, which is characterized in that the large-diameter attachment part is provided, on the outer peripheral surface thereof, with a circumferentially extending recessed portion (portion of 38 receiving 48) for fixation for receiving a damping member (48); and an inner peripheral area (inner area of 38 surrounding right end of 40 as seen in fig.4) of the large-diameter attachment part located on the bellows part side from said recessed portion for fixation surrounds the outer peripheral surface of the bushing at a clearance gap (gap between right side of 40 and 38), and the protrusions are disposed at the inner peripheral surface of the bushing within an axial range (axial distance between gap and protrusions) of the clearance gap. Note that the limitation "within an axial range" does not necessarily require that the protrusion and gap be axially coincident with one another since elements can be considered to be within a certain range (distance) of one another.

Claim 7. Devers discloses the joint boot as set forth in claim 1, which is characterized in that the protrusions (protrusions between 50 as seen in fig.3) are provided only at arc shaped wall

portions (arc shaped portions of 40 between 44) located between the circumferentially mutually adjacent lobe portions.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Devers (U.S. Patent 6,672,596) in view of Furuta (Pub.No.: US 2003/0069075).

Claim 8. Devers discloses the joint boot as set forth in claim 1 but does not state that the bushing is softer than the boot body. Furuta teaches (para.0027) that bushings should be formed from a softer material than the boot body, for the purpose of improving sealing performance. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the Devers bushing to be softer than the boot body, for the purpose of improving sealing performance.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Devers (U.S. Patent 6,672,596) in view of Wolf (Pub.No.: US2004/0056434).

Claim 9. Devers discloses the joint boot as set forth in claim 1, which is characterized in that the lobe portions of the bushing comprise each an inner wall portion (42a, 42b, 42c as seen in fig.2) jutting radially inwardly in a curved form, an outer wall portion (42d as seen in fig.2)

constituting part of the outer peripheral surface of the bushing, a radially extending central strut wall (central strut wall as seen in fig.7) connecting the inner wall portion and the outer wall portion in the middle of them relative to the circumferential direction, whereby two relief holes are juxtaposed in the lobe portion in the circumferential direction. Devers does not expressly disclose additional lateral strut walls but does state that the lobe portions should be stiffened to provide uniform support (col.3, l.50 –col.4, l.10). One of ordinary skill in the art would expect and easily recognize that duplicating the Devers strut wall to provide two additional lateral strut walls would inherently stiffen the lobe sections in accordance to Devers direction and thereby provide increased support. It has generally been recognized that duplicating the components of a prior art device is a design consideration within the skill of the art. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Furthermore, Wolf illustrates that modifying the number of support struts is a common design choice in the art (para.0031 and figs.6 and 7). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to duplicate the Devers strut wall to provide two additional lateral support walls for the purpose of increasing support and further since such practice is a design consideration in the art. Note that such modification would necessarily result in the lateral strut walls being on both sides of the central strut wall, whereby four relief holes are juxtaposed in the lobe portion in the circumferential direction.

Claim 10. Devers as modified by Wolf suggests the joint boot as set forth in claim 9, which is characterized in that the lateral strut walls slant in various directions (as shown by figure 7 of Wolf). The applicant has failed to demonstrate criticality and unexpected result derived from an outwardly slanted shape over an inwardly slanted shape such that it appears that

the applicant's own invention would perform similarly regardless of what direction of slant is chosen for the additional strut walls. Wherein a specific limitation provides no unexpected result or criticality, case law can be relied upon as the sole rationale in an obviousness rejection. See MPEP 2144.04. It has generally been recognized that the rearranging of parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70. Furthermore, one of ordinary skill in the art could have easily optimized the degree of slant to provide the greatest possible support. It has generally been recognized that the optimization of proportions in a prior art device is a design consideration within the skill of the art. In re Reese, 290 F.2d 839, 129 USPQ 402 (CCPA 1961). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to choose the slant of the additional strut walls to optimize support, such that they approach the central strut wall as they extend outwards, since the limitation provides no unexpected result and has thus been established by the case law cited above to be and obvious design consideration within the skill of the art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Referring to joint boots:

Dore U.S. Patent 4,320,632

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor MacArthur whose telephone number is (571) 272-7085. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

May 4, 2007

Victor L. MacArthur
Patent Examiner
Art Unit 3679